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ABSTRACT

The construct validity of the Attitudes of Professional Autonomy (APA) as a proxy measure of professional orientation was studied. The sample consisted of all teachers in 94 schools in 6 districts in Louisiana, closely representing the statewide distribution of all schools by level and socioeconomic status. Usable data were received from 1,921 teachers (APA responses and a demographic questionnaire). A series of factor analyses was completed, and Cronbach Alpha reliability procedures were used to examine the internal consistency reliability of the factor-analyzed, reconstructed versions of the APA. Findings suggest that the construct of professional attitudinal autonomy, as measured by the APA, is a two-dimensional construct. The realignment of items based on these factor analyses is a better operational definition and a more valid measure of the professional attitudinal autonomy construct than prior item alignments. The reconstructed APA subscales appear to be relatively independent measures, and both the Interpersonal Autonomy and Organizational Autonomy subscales are measures of the more global construct of professional attitudinal autonomy. Findings suggest the need to re-examine and redefine the concept of professional orientation to include current conceptions of professionalism in school organizational contexts. Two tables present study findings. (Contains 46 references.) (SLD)

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Teachers' Professional Orientation:

An Empirical Examination of the Construct Validity Using the Results of Large-Scale Factor Analyses

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Introduction

The recent education literature characterizes American public education by frequent and recurring calls for systemic educational reform (Murphy, 1989; Cuban, 1990). Yet, the more schools are called to significantly alter their structures and/or functions, the more they appear to persist in traditional ways (Cuban, 1990; Sarason, 1990). Within this context, the literature depicts teachers' responses to change as influenced by organizational role and status about "who we are" and "how we do things around here" (Corbett, Firestone, & Rossman, 1987; Darling-Hammond, 1990).

Initial responses to reform initiatives and subsequent experiences resulting in implementation of planned change efforts in states such as Utah, South Carolina, and most recently, Louisiana, seem to support the importance of individual beliefs, perceptions and attitudes for building positive receptivity toward change. Others (e.g., Chauvin & Ellett, 1990; 1991; Chauvin, Evans, & Ellett, 1992; Chauvin, Ellett, Claudet, Loup, Lofton, & Hill, 1990; Chauvin, Lofton, Loup, Evans, Hill, Claudet, & Ellett, 1991; Cohen & Ball, 1990; Darling-Hammond, 1990; Firestone & Corbett, 1988; Giacquinta, 1973; LaMaster, Tobin, & Bowen, 1990; Richardson, 1990; Tobin, 1990; Waugh & Punch, 1987) have echoed similar views regarding the critical role of teachers' beliefs and perceptions in effecting successful organizational change. In fact, Darling-Hammond (1990) suggests that teachers may be the true gatekeepers of school change and innovation, not policy-makers, school superintendents or principals. She also suggests that investigations of variables related to individual beliefs and attitudes, particularly those of teachers, has not been an integral part of past studies of change

efforts and may account for the increasing diversity and alteration of practices inconsistent with intended planned change initiatives.

Amidst the recurring calls for change initiatives that significantly alter teachers' roles in schools (e.g., teacher empowerment, shared decision-making, collaborative and reflective professional practice), there seems to be increased attention in the literature given to the examination of corresponding changes in teachers' perceptions of their roles in school organizations. Recently there has been a proliferation of writings focused on the professionalization of teaching (Darling-Hammond, 1988; Johnson, 1988; Weick & McDaniel, 1988; Wise, 1989). Firestone and Bader (1992) specifically examines teachers' bureaucratic and professional views of teaching within particular school contexts of educational reform.

Past efforts to investigate teachers' *professional* orientation have relied on conceptualizations of autonomy (Corwin, 1965, 1970; Hall, 1968, 1969; Forsyth & Danieswicz, 1985). However, in light of recent efforts to significantly alter the fundamental features of school organizations and teachers' roles within these contexts, new questions are being raised about the conceptualizations of teachers' professional orientation. What does it mean to be professional? Are teachers more, or less, professional when they work independently of their peers and school organizational structure? Are teachers more, or less, professional when they are loyal to the administration and align their individual practice with organizational rules and norms?

This paper presents the results of a study designed to explore the construct validity of the Attitudes of Professional Autonomy (APA) (Forsyth & Danisiewicz, 1985) as a proxy measure of professional orientation. The results of the study are discusssed in view of understanding

teachers' professional orientation in terms of current conceptualizations of professionalism in school organizations. Discussion is also focused on the implications of the findings for conceptualizing and defining what the construct of *teacher professionalism* means as applied to teachers' current and future role expectations in achieving planned organizational change in schools within the context of large-scale educational reforms.

Theoretical Perspectives

Among the early efforts to conceptualize role orientations within school organizations, Coughlan (1969) used a conceptual framework that included professional and organizational orientations. Each orientation (professional and organizational) was further differentiated. System-oriented and supervisory-oriented teachers reflected types of organizational orientations, while subject-oriented and staff-oriented teachers were described as specific types of professional orientation. A fifth group of teachers was identified in the sample as being socially-oriented, and these individuals were observed to have neither an organizational or professional orientation. A sixth group of teachers was identified as marginals who represented the residual teachers who were described as having mixed orientations. This sixth group of teachers comprised nearly half of the total sample in the study. Coughlan (1969) concluded that teachers are not yet full-fledged professionals, nor are schools clear-cut bureaucracies.

Corwin (1965, 1970) represented an extensive effort involving a series of studies spanning a two year period (1963-1965). Research activities involved more than 2000 educators in approximately 24 midwestern high schools and represented concerted research efforts to develop a conceptual model and empirical foundation for understanding and explaining "the character of professionalism, the principles on which schools are organized, and some of the tensions within

the teaching profession" (Corwin, 1970, p.6). At the time, these studies were unique because they represented one of the first attempts to investigate individuals' role orientations in terms of individuals within an organization, rather than individuals versus an organization. In these studies, role conceptions included both professional and bureaucratic principles of the organization as they were reflected through individual and shared beliefs. Corwin (1965, 1970) characterized professional orientation as being comprised of five key elements: 1) client orientation, 2) orientation to the profession and professional colleagues, 3) competence based on monopoly of knowledge, 4) decision-making authority, and 5) control over work.

Kuhlman and Hoy (1974) investigated the relationship between beginning teachers' socialization experiences (formal and informal) during their first year of teaching and changes in their bureaucratic and professional orientations. Conceptual definitions for each orientation were developed based upon the work of Corwin (1965, 1970). Professional orientation was conceptualized as a perspective characterized by a belief in a high degree of autonomy to make professional decisions in the best interests of students; a focus on expertise in the exercise of professional responsibilities and obligations; and a professional reference group orientation to keep abreast of new developments in the field.

Other studies have used slightly different conceptualizations of bureaucratic and professional orientations, have focused on only one type of role orientation or have expanded the bureaucratic-professional dichotomy to include other variations. For example, teachers' perceptions of their organizational roles have been previously described in terms of local and cosmopolitan orientations (Gouldner, 1957,1958; Erez & Israeli, 1980; Merton, 1957;

Raymond, 1979), indices of dogmatism and locus of control (Harrah, 1990; Raymond, 1979), and professional-discipline and careerist orientations (Wilensky, 1964).

Marjoribanks (1977) investigated the relationships between bureaucratic orientations, autonomy, and professional attitudes of teachers. Although the study was conducted in South Australia, the findings seem noteworthy. Bureaucratic orientations and professional attitudes were similar to conceptualizations of bureaucratic and professional orientations used in Corwin (1965; 1970) and Kuhlman and Hoy (1974). However, a conception of professional orientation was expanded to add conceptual emphasis to personal autonomy: defined as a structural component of professionalism that reflects the amount of decision making the teacher was allowed in school and the opportunities available to teachers for examining other teachers' performance. Marjoribanks reported significant linear and quadratic relationships between bureaucratic orientations and professional attitudes at different levels of autonomy. Although there were differences noted between male and female teachers, results showed that at each level of bureaucratic orientation, increases in levels of teachers' professional attitudes were associated with increases in the amount of autonomy afforded teachers.

Marjoribanks (1977) concluded that bureaucratic orientations and professional attitudes need not be in conflict if schools allow teachers increased levels of personal autonomy. He also concluded that efforts to enhance teachers' professsionalism must include increased opportunities to involve teachers in decision making in their schools and peer supervision of teaching. He also suggested that if teachers are not allowed personal autonomy, bureaucratic orientations may prove detrimental to teachers' professionalism.

Erez & Israeli (1980) sampled 400 high school teachers in Israel and reported findings to support various combined orientations representing three-dimensions: bureaucratic, local and cosmopolitan. Results indicated that teachers who rate high on all three orientations (bureaucratic, local, and cosmopolitan) were significantly more active in various areas of teachers' activities than teachers who had only one dominant orientation. These researchers also concluded that bureaucratic and local orientations were complementary of each other, but that cosmopolitan and bureaucratic orientations did not complement one another in their effect on teachers' involvement in selected activities. However, bureaucratic and cosmopolitan orientations were not conflicting either.

Drawing on the work of Corwin (1965, 1969), Hall (1968, 1969) and Kuhlman and Hoy (1974), Forsyth and Danisiewicz (1985) conceptualized professional orientation as professional power operationalized as two distinct dimensions of autonomy: autonomy from clients and autonomy from employing organization. The Attitudes of Professional Autonomy scale (APA), reflects these two dimensions, and was developed and pilot-tested before use in this study. Forsyth and Danisiewicz (1985) further theorized that occupational groups could be differentiated according to combinations of autonomy that are representative of true, semi- or mimic professions. True professions were defined as occupations in which members are autonomous on both dimensions, while semi-professions were defined as occupations in which members are autonomous on only one dimension. Mimic professions represented the third category of professions and were described as occupations in which members are autonomous on neither dimension. The sample was comprised of 1000 students enrolled in various preparation programs. Eight (8) different occupations were represented: medicine, law, education, nursing,

social work, librarianship, engineering and business administration. Forsyth and Danisiewicz (1985) identified distinct differences among the various occupational groups based on attitudinal autonomy from clients and attitudinal autonomy from the employing organization -- two dimensions of professional orientation. Forsyth and Danisiewicz (1985) found medicine and law to exemplify true professions, while education, nursing, business and engineering reflected autonomy characteristics of semi-professionals. Librarians were characterized as fitting the conceptual definition of a mimic profession. Of particular interest, participants in the education occupational group responded as client-autonomous semiprofessionals. This pattern of behavior/response is consistent with Etzioni's (1969) earlier conception of semiprofessionals. Based upon these findings, it seems that teachers are autonomous from clients (e.g., students), but are not as autonomous from the employing organization (e.g., school or district).

While current efforts are being made to professionalize teaching (e.g., development of a national teaching certification, National Board for Professional Teaching Standards), Kerchner (1984) offers an opposing perspective regarding teachers' changing perceptions of organizational roles in schools. He contends that the evolving character of union-management relationships during the past 20-25 years has influenced teachers' role-perceptions to be more structured and bureaucratically-oriented, than professionally-oriented. According to Kerchner (1984), teachers' currently perceive teaching and their roles in schools less like a profession and more like labor.

From yet another perspective, Corwin and Borman (1988) suggest that teachers' bureaucratic and professional orientations are not much different today than they were nearly thirty years ago. They also suggest that school organizational structures, formal and informal

roles, and psychosocial/interpersonal relationships are similar as well. While teachers subscribe to norms of autonomy, they are also compliant and obedient employees. In light of these views and the current efforts to significantly alter teachers' roles in schools (e.g., teacher empowerment, shared decision-making, collaborative and reflective professional practice), the conceptualization of professional autonomy proposed by Forsyth and Danisiewicz (1985) provided a useful framework to investigate the construct of teachers' professional orientation.

Methodology

Sample and Data Collection

The sample in this study consisted of all teachers in 94 schools within six districts in the southern region of Louisiana. The school sample closely resembled the statewide distribution of all schools by level (elementary, 57%; middle, 15%; high, 17%) and by socioeconomic status. Schools included in the sample were from urban/city, suburban, and rural/sparsely populated settings. The student population for individual schools in the sample ranged from 48 to 1293, and faculty size ranged from 10 to 85. Socioeconomic status (SES), as reflected by the totat percentage of students eligible for free or reduced cost lunces in each school, ranged from 0% to 98%, with the higher percentage representing lower SES levels. Useable data were received from 1921 teachers during the spring of 1992 as part of an instrument packet distributed to all teachers in the 94 schools (52 elementary, 18 middle, 24 secondary). At least 40% of the teachers in each of 81 schools (86.17%) responded to a demographic questionnaire and the Attitudes of Professional Autonomy(APA) (Forsyth & Danisiewicz, 1985).

Instrumentation

Professional orientation of teachers and principals was operationalized using the Attitudes of Professional Autonomy (APA) scales (Forsyth & Danisiewicz, 1985). The conceptual framework used in this study for the construct of teachers' professional orientation places heavy emphasis on high levels of individual autonomy from the organization and others. Thus, consistent with this conceptualization of professional orientation, the APA was used as a proxy measure of professional orientation. Forsyth and Danisiewicz (1985) operationally define professional orientation in terms of two dimensions: 1) autonomy from clients, and 2) autonomy from employing organization. These dimensions are reflected as distinct subscales in the Attitudes of Professional Autonomy (APA). Items used to construct this instrument were partially derived from the earlier work of Corwin (1965, 1970) and Hall (1968, 1969).

Forsyth and Danisiewicz (1985) conceptually define autonomy from client as the relative attitudinal autonomy expressed by individuals regarding decisional independence and conviction of once's own knowledge as these are related to their clients or potential clients. Autonomy from employing organization is conceptualized as the relative attitudinal autonomy expressed by individuals regarding the institution (e.g., school) in which they work in terms of organizational loyalty and individuals' willingness to bend organizational rules. Concepts measured in the APA are consistent with Kuhlman and Hoy's (1974) conception of professional orientation as:

> a perspective characterized by a belief in a high degree of autonomy to make professional decisions in the best interests of students; a focus on expertise in the exercise of professional responsibilities and obligations; and a professional reference group orientation to keep abreast of new developments in the field (p. 20).

Validity

Validity of the Attitudes of Professional Autonomy (APA) has been established by Forsyth and Danisiewicz (1985). Over a period of several years, the APA was developed and pilot tested. Subsequent research using the APA across eight occupational groups (e.g., teachers, doctors, lawyers, librarians) produced factor analytic results that supported the two dimensions reflected in the APA and the measure's ability to differentiate groups of occupational members in terms of professional orientation (i.e. attitudinal autonomy). A between factor correlation of .13 supports the two autonomy scales as independent dimensions of professional orientation (Forsyth & Danisicwicz, 1985; P.B. Forsyth, personal communication, December 11, 1991). Ability to statistically differentiate ($p < .0001$) among occupational groups using the APA has also been reported by Forsyth and Danisiewicz (1985).

Reliability

Cronbach Alpha reliability coefficients for the APA are reported by Forsyth and Danisiewicz (1985) for each of the two subscales of the APA. Alpha reliability coefficients for the Autonomy from Client subscale were reported as .83 and .76, respectively for pilot test results and a study involving eight occupational groups. Similarly, Alpha reliability coefficients for the Autonomy from Employing Organization subscale were reported as .80 on both occasions.

Structure/Scoring

The APA contains twenty-two (22) items comprising two subscales: 1) Autonomy from Client (11 items), and 2) Autonomy from Employing Organization (11 items). Responses to each item on the two subscales of the APA were obtained using an eight-point, Likert-type rating

scale ranging from 1 (strongly agree) to 8 (strongly disagree), anchored by four descriptors: Strongly Agree (1, 2), Agree (3,4), Disagree (5,6) and Strongly Disagree (7,8). Scores on each of the APA subscales may range from 11 to 88, depending upon the intensity of respondents' agreement or disagreement with items. Some items are reverse coded for the purposes of statistical analyses. The higher the sum of scores on each scale the greater the attitudinal autonomy. Thus, high total scores on the APA indicate a strong professional orientation, whereas low total scores are indicative of a weak professional orientation.

Data Analyses

Descriptive Statistics

Summary satatistics were completed for the APA. Means, standard deviations, ranges, and mean scores expressed as percentages of the maximum possible score were aggregated and reported for all teachers and by school level.

Factor Analyses

The APA had previously undergone extensive factor analyses as part of instrument development activities, and in conjunction with its use in prior research studies. However, past studies had not focused exclusively on education professionals (e.g., teachers) and the sample size used in this study was significantly larger than the groups of educators in prior investigations. In this study, efforts to examine the conceptual framework undergirding the APA through factor analyses (SAS Institute, 1985) were conducted in an attempt to verify the conceptual bases established in prior research.

A series of factor analyses were completed. Using principal components analysis, orthogonal and oblique rotation techniques (Promax, SAS Institute, 1985), unconstrained

solutions were generated, followed by orthogonal and oblique rotation techniques interactively extracting appropriate factors, based upon an examination of factor eigenvalues. Examination of scree tests, factor loadings, eigenvalues, variances explained and conceptual fit of the items with each factor were also used in determining the best and most reasonable representation of the data.

In particular, comparisons of solutions obtained using principal components analyses, orthogonal and oblique rotation techniques were made. In instances where factor analyses suggested reconstruction of the original version of the APA, conceptual fit of the data and consideration of reliability concerns contributed to subsequent decisions to retain a one-factor principal components solution, or a particular orthogonal or oblique solution. While oblique solutions do not assume complete independence among factors, they were considered as solutions that perhaps offered a more reasonable representation of data for measures when concern for the number of items retained on an instrument was a factor. In such instances, analyses of inter-factor correlations were also completed.

A set of decision rules was established and used in interpreting the results of these factor analyses and determining solutions which best represented the data. An item was retained using the following decision rules as a guide: 1) only if its loading on a given factor was greater than or equal to .30; 2) only on the factor for which its loading was the greatest; 3) only if it loaded primarily on one factor; and 4) if, when loading on multiple factors, the difference between loadings was greater than or equal to .20.

Factor pattern matrices were examined for one-factor principal components and orthogonal solutions, while factor structure correlation coefficients were analyzed for oblique

solutions. In these instances, factor loadings can be interpreted as Pearson product-moment correlations. That is, the higher an individual item loading, the stronger the statistical relationship between the item and the factor on which it was retained.

Based upon results of a variety of factor analyses, decisions were made to either retain the original operational definition of the construct, or to reconstruct scales or subscales. In all factor analyses completed, teachers were used as the units of analysis.

Prior to the initiation of factor analyses for the APA, all data were examined for missing or duplicate teacher responses. In instances where missing or erroneous date were noted, grand item means were substituted for missing or duplicate teachers' responses to maximize the number of useable cases available for analysis.

Reliability Statistics

Cronbach Alpha reliability procedures (SPSS, Inc., 1988) were used to examine the internal consistency reliability of the factor-analyzed, reconstructed versions of the APA. Reliability coefficients were also computed for the original total instrument version of the APA. A total instrument score was also used in these analyses for the original version of the APA. Reconstructed subscale scores were used for reliability analyses for the APA. Calculations of reliability coefficients were completed using both teachers and school means as the units of analysis. Reliability coefficients were computed for all teachers ($n=1921$) , as well as for teachers in schools that had at least 15 teacher respondents ($n=59$).

Results

Forsyth and Danisiewicz (1985), drawing on the prior work of Corwin (1968, 1970) and Hall (1968, 1969), conceptualized professional orientation in terms of two dimensions of

professional autonomy: 1) autonomy from client (e.g., students), and 2) autonomy from employing organization (e.g., schools). Factor analyses were conducted in this study in an attempt to confirm prior conceptions of professional autonomy as a proxy measure of teachers' professional orientation.

An exploratory factor analysis (SAS Institute, 1985) was conducted for the 22 APA items to test hypotheses about the structure of the professional orientation construct. Missing or erroneous data were noted for approximately 5.21% of the entire data set.

Principal Components Analysis

Using principal components analysis, orthogonal and oblique rotation techniques (Promax, SAS Institute, 1985), an initial unconstrained factor solution yielded six factors. Based upon final communality estimates, the six-factor solution accounted for 50.91% of the variance in the data. Subsequently, a series of factor analysis solutions using both orthogonal and oblique rotations (Promax) were completed iteratively extracting from one to six factors (SAS Institute, 1985).

One-factor solution. As shown in Table 1, the one-factor principal components solution resulted in 8 of the 22 APA-items (64%) loading at or exceeding .31. Factor loadings ranged from .31 to .62, with 11 of the 22 (50%) loading at or exceeding .45. The percentage of variance in the data explained by the one-factor solution was 15.19%.

Orthogonal Solution

Twelve items loaded on only a single factor in the two-factor orthogonal solution. As shown in Table 2, the first factor (6 items) accounted for 13.80% of the variance in the data, while the second factor (6 items) accounted for 12.32% of the variance. Based upon the final

Table 1

Summary of Factor Pattern Structure Coefficients (1 Factor Solution) for the Attitudes of Professional Automony Scale (APA) (n=1921)

APA Item	1 Factor[b]
1[a]	.32
2	
3[a]	
4[a]	.32
5	
6[a]	.55
7[a]	.50
8[a]	.49
9[a]	.33
10[a]	.50
11[a]	.57
12	
13	
14	
15	
16[a]	
17	
18[a]	
19	
20[a]	
21[a]	
22	
Variance Explained	15.19%[c]

[a] Items has been reverse-scored.
[b] Principal components solution.
[c] Expressed as the percentage of explained variance in the data for the solution.

Table 2

Summary of Rotated Factor Pattern (Orthogonal) and Factor Structure (Oblique) Coefficients for 2 Factor Solutions for the Attitudes of Professional Automony Scale (APA) (n=1921)

	2-Factor Orthogonal		2-Factor Oblique	
APA Item	I	II	I	II
1[a]		.39		.40
2				
3[a]		.50		.49
4[a]		.45		.45
5				
6[a]				.32
7[a]				.49
8[a]				
9[a]		.60		.59
10[a]		.63		.64
11[a]				.37
12	.60		.61	
13	.70		.69	
14	.66		.65	
15	.57		.57	
16[a]			.56	
17	.56			
18[a]			.49	
19	.48			.33
20[a]				.47
21[a]				.52
22		.53		
Variance Explained[b]	13.80%	12.32%	14.09%	12.55%
Total Variance Explained (2-Factor)[b] = 26.12%				

[a] Items has reverse-scored.

[b] Expressed as a percentage of the explained variance in the data for the solution.

communality estimate, the total percentage of explained variance in the data resulting from this solution was 26.12%.

As constructs are re-examined, particular attention needs to be given to developing comprehensive and clearly stated descriptions of the essential elements of conceptual definitions. Efforts to refine the teacher professional orientation construct will also need to ensure that the conceptual definitions are timely and reflect current professional thinking.

Oblique Solution

Also shown in Table 2, the two-factor oblique solution had 17 items loading on only a single factor. Factor loadings ranged from .33 to .69, with 14 of the 22 items loading at or exceeding .40. When ignoring other factors in the solution, the first factor (6 items) accounted for 14.09% of the variance in the data, while the second factor (11 items) accounted for 12.55% of the variance. Based upon the final communality estimate, the total percentage of explained variance in the data accounted for by the two-factor oblique solution was 26.12%. Final Solution Retained

A variety of analyses were completed with the APA. In addition, correlations between the two factors in the oblique solution were examined to determine their relative independence. A correlation of (-.13) was obtained for the two factors, verifying these factors to be rather independent of one another. Consideration of reliability concerns and the exploratory nature of the study influenced the decision to retain the two-factor oblique solution (17 items), rather the simpler orthogonal solution (12 items). Thus, results of the retained two-factor oblique solution confirmed the APA (a proxy measure of professional orientation) as a two-dimensional construct measure.

Subscale Structure/Interpretation

Content analysis of the specific items loading on each APA factor did not completely agree with the original assignment of items to subscales by Forsyth and Danisiewicz (1985). As reflected in Table 2, six items loaded on Factor I and eleven loaded on Factor II.

APA subscales were reconstructed to reflect the items loading on each factor in the two-factor oblique solution that was retained. Examination of the content reflected in each set of items prompted assignment of alternate subscale descriptions to better reflect the content in each subscale/factor.

Organizational autonomy. The six items on Factor I appear to reflect more general elements of organizational autonomy, than just autonomy from the employing organization. As applied to school organizations, items reflected in Factor I target this broader conception of autonomy as it applies to an organization. Thus, items in the organizational autonomy subscale represent individuals' preference to act independently of organizational influence and rules.

Interpersonal autonomy. The 11 items loading on Factor II seem to more clearly reflect a broader conception of interpersonal autonomy than just from clients. That is, items loading on Factor II target autonomy not only from clients (i.e., students), but also colleagues, co-workers and other individuals with whom teachers interact. Thus, items in the interpersonal autonomy subscale seem to broadly reflect individuals' preferences to: 1) act independently of human influence that might emanate from co-workers (e.g., teachers), other professionals or adults (e.g., other education professionals), or clients (e.g., students); and 2) maintain higher levels of allegiance to professional convictions regarding their roles and decision-making.

Instrument development activities and use of the APA (Forsyth & Danisiewicz, 1985) support the APA as a valid and reliable measure of professional attitudinal autonomy. Results of the factor analyses in this study confirmed the APA as a two-dimensional measure of professional attitudinal autonomy: 1) autonomy from client; and 2) autonomy from employing organization. However, the alignment of items on these factors did not completely confirm the original alignment of items. The two factors identified were relatively independent.

Reliability Analyses

Internal consistency reliability coefficients were somewhat lower than those previously reported for the APA. Alpha internal consistency reliability coefficients for the APA (total instrument score) for teachers was .55. Alpha coefficients for the APA subscales for teachers were .66 for the Interpersonal Autonomy subscale and .71 for the Organizational Autonomy subscale. Alpha coefficients for teachers in all schools with at least 15 teacher respondents for the APA scale/subscales were also calculated: for the APA (total instrument), 49 of 59 Alpha coefficients were between .40 and .79; 37 of 59 coefficients for the Interpersonal Autonomy and 45 of 59 coefficients for the Organizational Autonomy subscale were between .60 and .89.

Summaries of Descrptive Statistics

Item descriptive statistics for the APA scale/subscales were computed for the total sample of teachers in all schools and by school level. Responses for selected items in the APA were reverse-scored during data compilation for the purposes of statistical analyses and clarity. summary data reflect item scores that may range from a minimum score of 1.00 (indicative of a weak professional orientation) to a maximum score of 8.00 (indicative of a strong professional orientation). Thus, higher mean scores reflect higher levels of professional orientation among

respondents. Mean percentages of maximum possible scores (x%maximum) were also computed for item, subscale, and total instrument scores. Teachers were asked to respond to the 22-item APA in terms of their individual perceptions and beliefs regarding their roles and interactions with others in school.

Item means for the APA ranged from 2.95 (item 16: This school should not expect to have my wholehearted loyalty and support.) to 7.09 (item 3: Giving students what they want does not necessarily serve their best interests.), with standard deviations ranging from 1.23 (item 9) to 2.09 (item 15. Twenty items had mean teacher responses at or exceeding the midpoint of 4.0, with only two item mean scores below the midpoint. School level summaries provided similar results.

Intercorrelations Among Subscales/Scales

Pearson product-moment correlations between the factor-analyzed, reconstructed APA subscales/scales were computed for all schools and by school level. School (teacher) mean scores were used as the units of analysis. Only schools with at least 40% teacher response rates ($n=81$) were used for computing these correlations. The correlations between the IA and OA subscales show little or no relationship (.02, $p<.88$). At the elementary and middle school levels, relative independence of these subscales was further supported (-.001 and -.51, respectively). The correlation between the IA and OA at the secondary level (.43, $p<.07$) suggests a moderate, positive relationship between the two subscales. Correlations between the IA and OA generally support these subscales as relatively independent measures of distinct constructs, both of which seem to operationally define the more abstract construct of professional attitudinal autonomy (APA).

Discussion

In recent years, there has been a resurgence in the literature concerned with the professionalization of teaching. In part, this renewed interest in the professionalism of teachers has resulted from current educational reform initiatives that purport to significantly alter systemic aspects of school organizations that include restructuring teachers' roles and responsibilities. Despite this renewed interest, research efforts of the past 15 to 20 years have heavily identified professional orientation with elements of attitudinal autonomy. Earlier conceptions of professional orientation have been defined in terms of autonomy from other individuals within the organization, as well as autonomy from organizational structures and processes. Thus, the more independently individuals operated within the organization, the more they were considered to be professionally oriented.

Based upon these earlier conceptions of professional orientation, instruments such as the Attitudes of Professional Autonomy (APA) (Forsyth & Danisiewicz, 1985) have often been used as proxy measures of the more global conception of teachers' professional orientations. More recent conceptions of professionalism among teachers suggest that collaborative efforts and group consensus are also important elements of professional orientations in teaching. These recent developments in the literature suggest that conceptions of professional orientation may need to be updated to reflect the newer ideas regarding specific elements of professionalism among teachers in school organizations.

The findings in this study lead to the following major conclusions: 1) the construct of professional attitudinal autonomy, as measured by the APA, is a two-dimensional construct; 2) the re-alignment of items based on these factor analyses is a better operational definition and a

more valid measure of the professional attitudinal autonomy construct than prior item alignments; 3) the reconstructed APA subscales are relatively independent measures; 4) both reconstructed subscales (Interpersonal Autonomy and Organizational Autonomy) are measures of the more global construct of professional attitudinal autonomy; and 5) conceptual and operational definitions of professional attitudinal autonomy as measured by the APA are insufficiently comprehensive to accommodate the broader conception of professional orientation.

Although the APA was confirmed as a two-dimensional measure of attitudinal autonomy, these results suggest sole reliance on measures of autonomy may be too limited and may lead to confusing or erroneous conclusions regarding the broader conception of professional orientation. Based upon the current discussion in the literature, it seems that current conceptualizations of professional orientation may no longer be best described in terms of autonomy, expertise and an outer reference group. In these writings, school organizations are depicted as sites for reform initiatives that include school restructuring, teacher empowerment, collaborative decision making, and professional and collaborative reflective practice. In these contexts, how are teachers' involvement in professional decision making, goal consensus building, and site-based management practices reflected in current conceptions of professional orientation?

Certainly, autonomy may be a part of professional orientation, but issues related to professional practice and ethics may also be important aspects of this construct. These have yet to be fully explicated in the literature pertaining to conceptual and operational definitions of professional orientation. To discuss autonomy as an element of professional orientation means that it must be considered within specific school organizational contexts. To do otherwise may be confusing and perhaps even misleading. For example, teachers may describe themselves as

being autonomous from the organization and not behave very professionally in practice. Thus, behaving in autonomous ways may or may not operationally define one's professional orientation. How are the contextual influences of particular school organizations represented in the extent to which teachers are depicted as being more or less professionally oriented?

The extent to which a teacher perceives an organization, as a whole, may strongly influence how s/he responds to situations and/or makes decisions and perceives his/her roles within the organization. For example, if a school district has adopted a new curriculum program shown to benefit students' learning, a teacher who chooses not to cooperate may be acting autonomously, but at the same time, may be acting in an unprofessional manner. However, if teachers in a school decide that they are going to defy school rules regarding corporal punishment of students, a teacher who chooses not to join these teachers may be acting professionally and autonomously as well.

The findings in this study suggest that there is a significant need to re-examine, and perhaps, re-define the concept of professional orientation to include current conceptions of professionalism in school organizational contexts. Only then, can appropriate measures for studying the construct and relationships with other variables of interest (e.g., teacher receptivity to change) be further developed. As such measures are developed, there may also be a need to consider alternative data collection methods (e.g., interview, critical incidents or agreement questionnaires, and/or qualitative research methodology). Current measures (e.g., APA) may not adequately control for the influence of contextual variables permeating respondents' work environments.

For example, in a school context that, as a whole, is perceived to be highly collaborative and strongly professionally oriented, a teacher who is also professionally oriented may describe self-perceptions of role orientation as low on interpersonal and/or organizational autonomy because the organizational orientation (high professional) is congruent with the teacher's beliefs about professionalism. As a result, the teacher is aligned with and committed to these similar beliefs and organizational norms. If a teacher works in a school where personal beliefs and school norms (e.g., role orientations) are contradictory, rather than similar, a different set of responses would probably result. Existing measures may not be sensitive enough to assess these fine distinctions and contextually-specific incidents. Teachers' beliefs about their roles and "who we are" (Corbett, et al., 1987) and their prior knowledge (Darling-Hammond, 1990) are important considerations in current efforts to restructure the form and function of school organizations. Recent attention to professional belief systems of teachers and what it means to be a professional teacher appear to provide a ready forum for continuing conceptual and measurement efforts to define professional orientation of individuals in school organizations.

Past investigations of bureaucratic and professional orientations have defined these constructs as distinct, but not as polar opposites (Corwin, 1965, 1970; Erez & Israeli, 1980; Kuhlman & Hoy, 1974; Thornton, 1970; Wilensky, 1974). In a related investigation by Chauvin (1992) results obtained using the APA and a measure of bureaucratic orientation, the Bureaucratic Orientation Scale (Kuhlman & Hoy, 1974), suggest that polarity may exist between at least one dimension of professional orientation (e.g., organizational autonomy) and bureaucratic orientation; while another dimension of professional orientation (e.g., interpersonal autonomy) may be independent of bureaucratic orientation, but not opposite. However, no

determination whether bureaucratic and professional orientations are coexisting constructs or bipolar opposites can be made until more comprehensive conceptual and operational definitions of professional orientation become available.

For example, an important and clear distinction between organizational commitment (in terms of beliefs, values, and vision) and administrative loyalty (in terms of allegiance and deference to administrative authority, and adherence to rules and procedures) appears needed. Organizational commitment may closely align with a conception of professional orientation, while administrative loyalty may be reflective of bureaucratic orientation. Clarification and further refinement of these constructs seem particularly indicated in light of current efforts to enhance levels of organizational commitment and cohesiveness among personnel (e.g., teachers and principals) in school organizations (Firestone & Corbett, 1988; Hallinger & Murphy, 1985; Hall, 1987, 1988; Joyce, 1990; Sergiovanni, 1986). Thus, as professional orientation is re-examined, re-defined, and operationally defined, it will be important to consider how current conceptions of bureaucratic orientation compare and change as well.

Conclusion

The results in this study suggest that measures of professional attitudinal autonomy, such as the APA, may no longer be sufficient to measure a teacher professional orientation construct. Given the current writings on professionalism in teaching, autonomy may reflect too narrow a construct definition to suffice for the broader conception of professional orientation. Other important elements of professional orientation that are now reflected in the current literature suggest the need to update and refine both the conceptual and operational definitions of this important construct. Future research efforts in response to this void might employ a two-step

process. First, research efforts should strive to develop conceptual accuracy in describing the construct of teacher professional orientation. Second, research efforts to development sound measurement are needed to address construct validation, reliability, and other psychometric concerns.

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